



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/019,418	03/29/2002	Yasuhiro Umekage	29288.4600	1936

20322 7590 03/09/2004

SNELL & WILMER
ONE ARIZONA CENTER
400 EAST VAN BUREN
PHOENIX, AZ 850040001

EXAMINER

MACK, COREY D

ART UNIT	PAPER NUMBER
----------	--------------

2855

DATE MAILED: 03/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/019,418

Applicant(s)

UMEKAGE ET AL.

Examiner

Corey D. Mack

Art Unit

2855

AW

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 April 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 70-148 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 70-148 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Restriction is required under 35 U.S.C. 121 and 372.
2. This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.
3. In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 70-81, drawn to a flowmeter;

Group II, claim(s) 82-94, drawn to a flowmeter;

Group III, claim(s) 95-108, drawn to a flowmeter;

Group IV, claim(s) 109, 112, 120 and 122, drawn to a flowmeter;

Group V, claim(s) 110, 111, 113-119, 121, and 123, drawn to a flowmeter;

Group VI, claim(s) 124-142, drawn to a flowmeter;

Group VII, claim(s) 143-145, drawn to a flowmeter; and,

Group VIII, claim(s) 146-148, drawn to a flowmeter.

4. The inventions listed as Groups I-VIII do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

A. The special technical feature of the invention as described in the claims of Group I is "number-of-times change means for changing the predetermined number of repetition times according to the frequency detected by the frequency detection means."

B. The special technical feature of the invention as described in the claims of Group II is "selection means which switches an output of the transmission/reception means so as to allow the output from the transmission/reception means to be used for detecting a flow rate of the fluid and for detecting a pressure variation in the flow path."

Art Unit: 2855

C. The special technical feature of the invention as described in the claims of Group III is “measurement control means for controlling each of the transmission/reception means, the repetition means, the time measurement means, the flow rate detection means, and the variation detection means; and measurement monitoring means for monitoring a time signal relevant to a measurement timing of each of the transmission/reception means, the repetition means, the time measurement means, the flow rate detection means, and the variation detection means, or monitoring the number of times that the transmission/reception of the signal is repeated.”

D. The special technical feature of the invention as described in the claims of Group IV is “stable flow rate calculation programs based on the instantaneous flow rate value measured by the instantaneous flow rate detection means according to a determination result of the fluctuation determination means.”

E. The special technical feature of the invention as described in the claims of Group V is “stable flow rate calculation means for calculating a stable flow rate of the fluid based on an output from the filter processing means.”

F. The special technical feature of the invention as described in the claims of Group VI is “periodicity change means for sequentially changing a driving method of the driver circuit.”

G. The special technical feature of the invention as described in the claims of Group VII is “a second timer for measuring a time period from a time when the reception detecting circuit detects a receipt of the ultrasonic wave pulse to a time when a value of the first timer changes; and a calculation section for calculating a flow rate of the fluid to be measured, based on the outputs from the first and second timer.”

H. The special technical feature of the invention as described in the claims of Group VIII is “periodicity stabilizing means for sequentially changing a driving method of the driver circuit, wherein the control section controls the periodicity stabilizing means such that a measurement frequency is always maintained to be constant.”

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Art Unit: 2855

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Corey D. Mack whose telephone number is (571) 272-2181. The examiner can normally be reached on M-F, 8:30-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on (571) 272-2180. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Corey D. Mack, Esq.
Patent Examiner
Art Unit 2855

February 25, 2004



EDWARD LEFKOWITZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800